

### REMARKS

Claims 1, 3, 10-42, 44, 51-83, 85, and 92-125 are pending in the application. Claims 1, 42, and 83 are hereby amended. Applicant respectfully requests allowance of the claims and consideration of the following remarks.

#### Objection to the Specification

The Office Action objected to the specification for failing to provide proper antecedent bases for the subject matter of claims 12, 53, and 94. Applicant has amended the specification to include the subject matter of claims 12, 53, and 94. The amended specification contains no new matter.

#### Rejections Based Upon 35 U.S.C. § 103(a)

Claims 1-11, 13-16, 18, 22, 27, 30-57, 59, 63, 68, 71-93, 95, 98, 100, 104, 109, and 112-125 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,638,371 (Raychaudhuri et al) in view of U.S. Patent No. 6,324,184 (Hou). Applicant respectfully traverses the rejection.

Amended independent claim 1 recites dynamically configuring a media access control (MAC) layer in the wireless transmission link for the requested communication service using fuzzy logic. Raychaudhuri and Hou, separately or in combination, do not teach or suggest dynamically configuring a MAC based on fuzzy logic.

Claim 1 provides for dynamically *configuring* the MAC using fuzzy logic. In contrast, Raychaudhuri dynamically *allocates* slots in a MAC- the *configuration* of the MAC remains constant. For example, 54 slots are reserved for ABR cells, 54 slots are reserved for CBR cells, and VBR cells share the 54 slots with the ABR cells (Raychaudhuri, col. 8, lines 26-39). Whereas Raychaudhuri allocates cells to their respective slots in the MAC, claim 1 provides for re-configuring the MAC on an ongoing basis. Claim 1 advantageously provides a time slotted transmission scheme where data from communication services are multiplexed according to their delivery requirements which include bandwidth, delay, and loss requirements.

Hou is distinguished from claim 1 for similar reasons as Raychaudhuri. Hou discloses a MAC that dynamically *allocates* bandwidth (Hou, col. 5, lines 10-14). However, Hou does not

disclose dynamically *configuring* the MAC. Additionally, Hou does not disclose dynamically configuring the MAC based on fuzzy logic.


Claims 12, 53, and 94 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Raychaudhuri in view of Hou and further in view of Boucher (U.S. Patent No. 6,226,680). Applicant has distinguished the claims from Raychaudhuri and Hou above, thereby obviating the need for a discussion under 35 U.S.C. § 103(a) related to Raychaudhuri in view of Hou and Boucher.

Independent claims 42 and 83 contain limitations similar to claim 1 and are therefore allowable over the prior art. The dependent claims contain limitations that render them separately allowable over the prior art. However, for the sake of brevity and because the dependent claims depend from allowable independent claims, applicant forgoes such a discussion.

**CONCLUSION**

The claims in their present form are allowable over the art of record. Applicant therefore solicits their allowance. Any fees in addition to those submitted may be charged to deposit account 21-0765.

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Stephen S. Roche, Reg. No. 52,176  
Duft Setter Ollila & Bornsen  
Tel: (303) 938-9999  
Fax: (303) 938-9995

**Correspondence address:**

**CUSTOMER NO. 28004**

Attn: Harley R. Ball  
6391 Sprint Parkway  
Mailstop: KSOPHT0101-Z2100  
Overland Park, KS 66251-2100